# Explore Weather Trends

**Following steps have taken for this project:**

Step 1: I extract the city data from the database where I live in the country.

```
SELECT * FROM city_data WHERE country='India'
AND city='Nagpur' AND avg_temp IS NOT NULL
ORDER BY year;
```

Then downloads CSV file from the workspace.

Step 2: I extract the global data from the database.

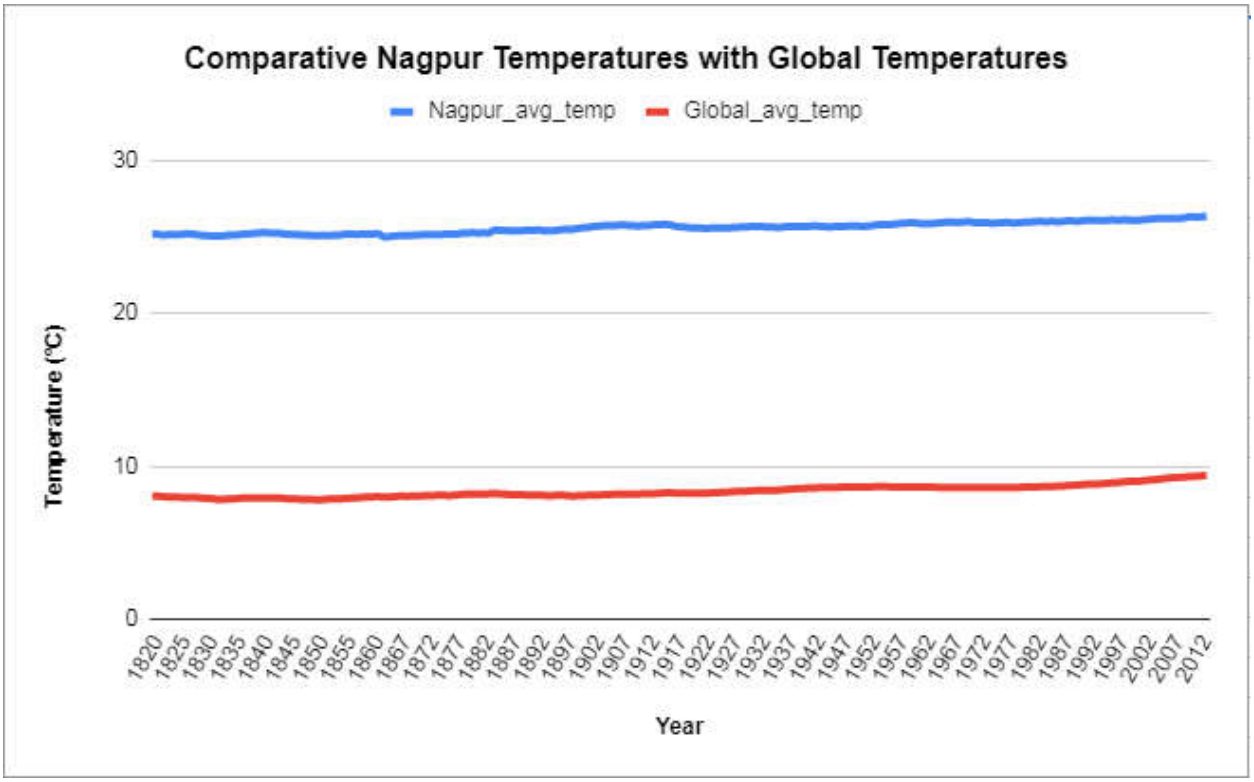
```
SELECT * FROM global_data ORDER BY year;
```

Then downloads CSV file from the workspace.

Step 3: I adjust and combined systematically by their respective year of local and global temperature data into single excel.

Step 4: I calculate 5 years, 15 years, and 20 years moving average of the Nagpur city and Global data, then analyze which one is more appropriate and smooth. At the last, I feel 20 years moving average is suitable for the smooth and clear graph.

Steps 5: I format the line graph: - Give the title and adjust center with bold, then provide meaningful label for x and y axis.




My four Observation:

- In the above line diagram, we can clearly see the how much major difference between Nagpur and Global temperatures. Nagpur temperature figure out 17 degrees Celsius more than global temperature since over the last one hundred fifty years.

- Nagpur city is central location of India there is not surrounding by ocean. So, we can see only subtle variation in the late and middle 19$^{th}$ century.

- We sure Nagpur city temperate is very hotter than global temperature by seeing their major difference between them.

- The overall trend look like is getting hotter. For instance, we can notice by seeing two line they are moving ultimately upward direction. Although some slight variation in temperature, they are consistent over the last few hundred years. Therefore, we can estimate long-term effect of global warming.